



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/423,086	01/28/2000	ULRICH BLEY	306.37599X00	6327

7590

04/12/2005

ANTONELLI TERRY STOUT & KRAUS
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209

EXAMINER

LANGEL, WAYNE A

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/423,086

Applicant(s)

BLEY ET AL.

Examiner

Wayne Langel

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit 1754

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-13, 15-18, 20-23 and 25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over DE 19505568 (Redecker et al.), for the reasons given in the last Office action.

Claims 14, 19 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Redecker et al., for the reasons given in the last Office action.

Applicant's argument, that since Redecker et al. clearly

Art Unit 1754

disclose using compounds other than metallocenes, metallocene derivatives, sulfur and sulfur compounds to reduce nitrogen oxides, that clearly these NO_x reducing additives perform a significant function in terms of converting nitrogen oxides, and that with these NO_x reducing additives present, it is not clear what function, if any, the combustion moderators of Redecker et al. perform in terms of converting nitrogen oxides, is not convincing. It would not be expected that the NO_x reducing additives disclosed in the third and fourth full paragraphs on page 7 of the English translation of Redecker et al. would result in absolutely no NO_x reduction due to the vaporized sulfur, ferrocene or ferrocene derivatives as disclosed in the last full paragraph on page 6 of the English translation of Redecker et al.

Applicant's argument, that the Examiner has done nothing more than allege that the Redecker et al. method may convert nitrogen oxides in the gas mixture to non-toxic compounds in the homogeneous gas phase reaction with the vaporized combustion moderators, and that this is not sufficient to establish inherency, is not convincing. Applicant's specification provides clear evidence that sulfur, ferrocene or ferrocene derivatives would be vaporized in a pyrotechnic reaction, and that such vaporized sulfur, ferrocene or ferrocene derivatives would convert nitrogen oxides in the gas mixture to non-toxic compounds

Art Unit 1754

in a homogeneous gas phase reaction. It would not be expected that the specific nitrogen oxides-reducing additives disclosed in the third and fourth full paragraphs on page 7 of the English translation of Redecker et al. would interfere with such process to the extent that there would be absolutely no nitrogen oxides-reducing function for the sulfur, ferrocene or ferrocene derivatives. In any event, Redecker et al. teach in the paragraph bridging pages 7 and 8 of the English translation that the additives may be incorporated in the outflow channels of the generator. When the additives are employed in the outflow channels of the generator, there would be no additives present in the pyrotechnic mixture disclosed in the first full paragraph on page 4 of the English translation of Redecker et al. to provide a nitrogen oxides-reducing function, so that the sulfur, ferrocene or ferrocene derivative present as a combustion moderator would clearly perform such function. Applicant's argument, that Redecker et al. clearly do not suggest a method for reducing nitrogen oxides in which the nitrogen oxides reducing substance consists essentially of or consists of at least one compound selected from the group consisting of metallocenes, metallocene derivatives, sulfur and sulfur compounds, is not convincing. When the additives are incorporated in the outflow channels of the generator, the nitrogen oxides-reducing substance disclosed

Art Unit 1754

in the first full paragraph on page 4 of the English translation of Redecker et al. would "consist essentially of" or "consist of" the sulfur, ferrocene or ferrocene derivative of the combustion moderator, since the additives would not be present in such mixture. It is irrelevant as to whether the additives in the outflow channels of Redecker et al. would be at least partially vaporized by the hot gases so as to carry out their intended function.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier

Serial No. 09/423,086

-6-

Art Unit 1754


communications from the examiner should be directed to Wayne A. Langel whose telephone number is (571) 272-1353. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (571) 272-1358. The fax phone number for this Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WAL:cdc

April 7, 2005


WAYNE A. LANGEL
PRIMARY EXAMINER